

|                                              |         |                        |
|----------------------------------------------|---------|------------------------|
| <b>SANYO</b>                                 | No.3881 | <b>2SB1510/2SD2284</b> |
| PNP/NPN Epitaxial Planar Silicon Transistors |         |                        |
| <b>60V/3A Driver Applications</b>            |         |                        |

**Applications**

- Motor drivers, hammer drivers, relay drivers.

**Features**

- High DC current gain.
- Good dependence of DC current gain.

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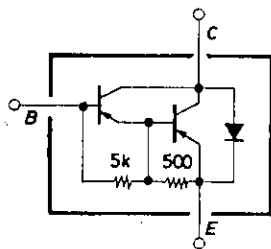
**Absolute Maximum Ratings at Ta = 25°C**

|                              |           |             | unit |
|------------------------------|-----------|-------------|------|
| Collector-to-Base Voltage    | $V_{CBO}$ | (-)80       | V    |
| Collector-to-Emitter Voltage | $V_{CEO}$ | (-)60       | V    |
| Emitter-to-Base Voltage      | $V_{EBO}$ | (-)6        | V    |
| Collector Current            | $I_C$     | (-)3        | A    |
| Peak Collector Current       | $i_{cp}$  | (-)6        | A    |
| Collector Dissipation        | $P_C$     | 1.5         | W    |
| Junction Temperature         | $T_j$     | 150         | °C   |
| Storage Temperature          | $T_{stg}$ | -55 to +125 | °C   |

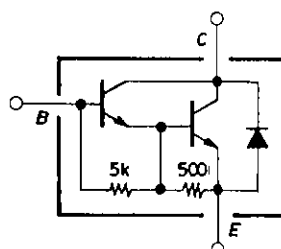
**Electrical Characteristics at Ta = 25°C**

|                          |               |                                  | min   | typ | max    | unit    |
|--------------------------|---------------|----------------------------------|-------|-----|--------|---------|
| Collector Cutoff Current | $I_{CBO}$     | $V_{CB} = (-)60V, I_E = 0$       |       |     | (-)10  | $\mu A$ |
| Emitter Cutoff Current   | $I_{EBO}$     | $V_{EB} = (-)5V, I_C = 0$        |       |     | (-)2.5 | mA      |
| DC Current Gain          | $h_{FE(1)}$   | $V_{CE} = (-)2V, I_C = (-)1A$    | 2000  |     |        |         |
|                          | $h_{FE(2)}$   | $V_{CE} = (-)2V, I_C = (-)2A$    | 1000  |     |        |         |
| C-E Saturation Voltage   | $V_{CE(sat)}$ | $I_C = (-)2A, I_B = (-)4mA$      |       |     | (-)1.5 | V       |
| B-E Saturation Voltage   | $V_{BE(sat)}$ | $I_C = (-)2A, I_B = (-)4mA$      |       |     | (-)2.0 | V       |
| C-B Breakdown Voltage    | $V_{(BR)CBO}$ | $I_C = (-)1mA, I_E = 0$          | (-)80 |     |        | V       |
| C-E Breakdown Voltage    | $V_{(BR)CEO}$ | $I_C = (-)10mA, R_{BE} = \infty$ | (-)60 |     |        | V       |

**Electrical Connection**



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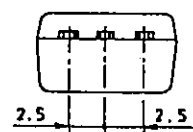
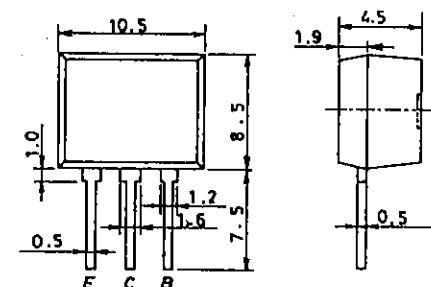


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Unit (Resistance :  $\Omega$ )

**Package Dimensions 2084**

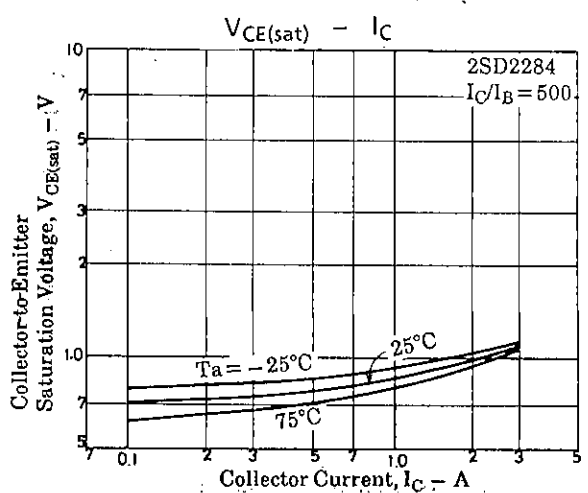
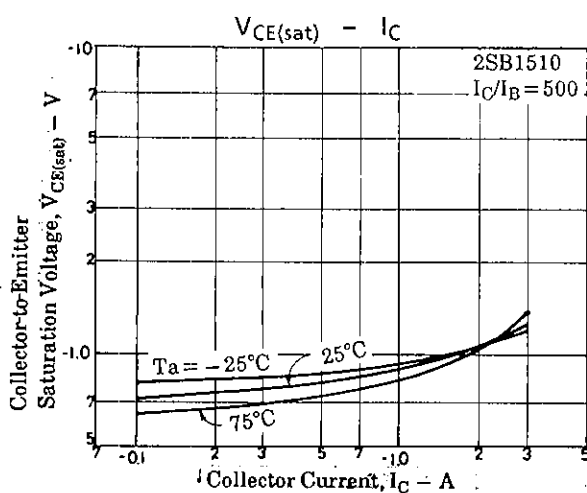
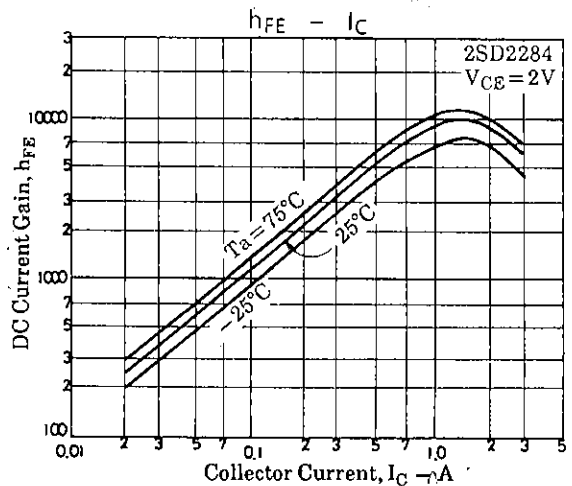
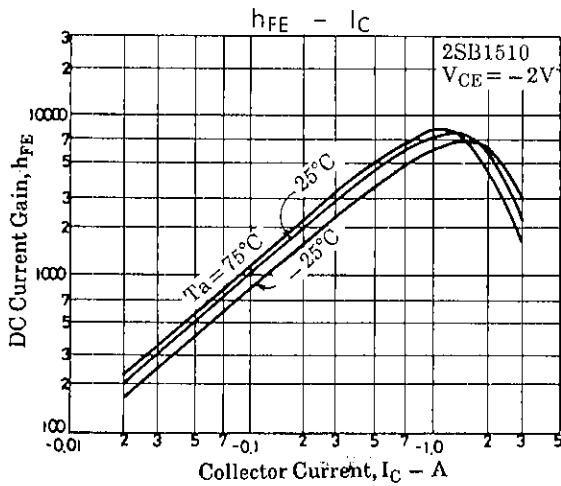
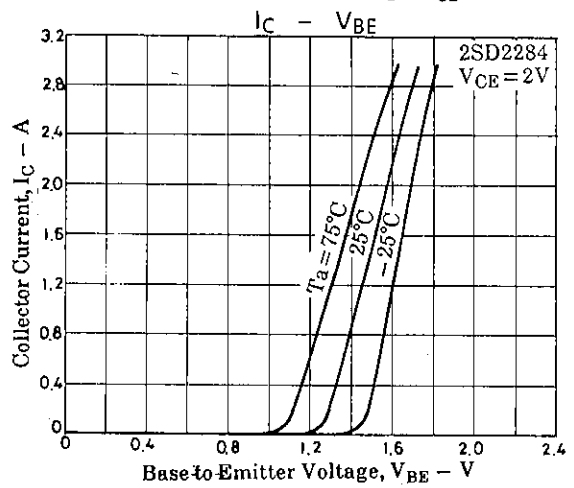
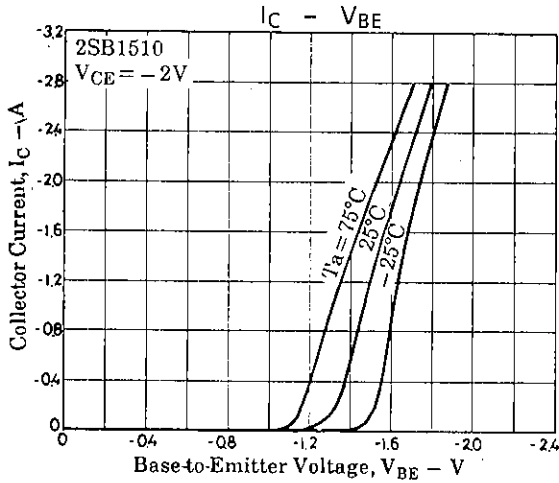
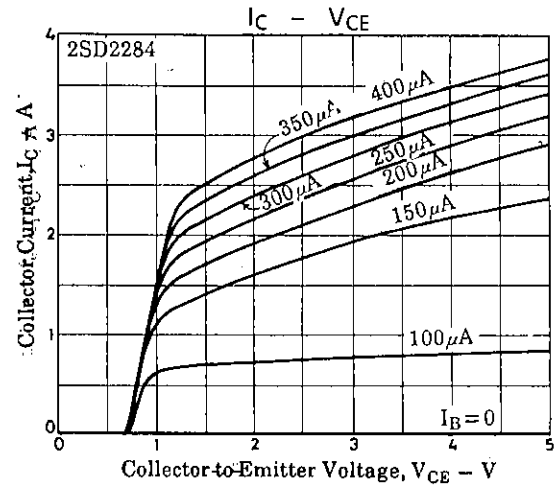
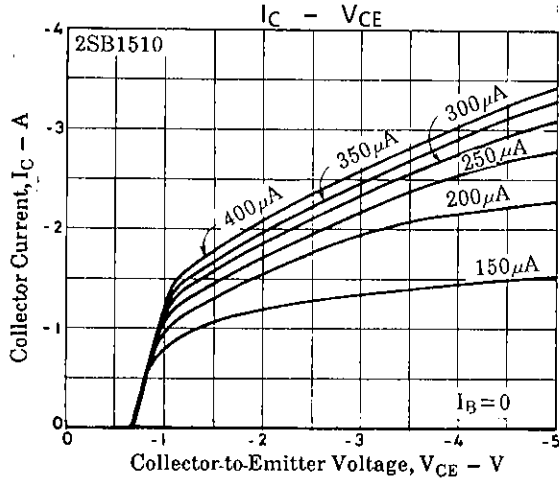
(unit : mm)



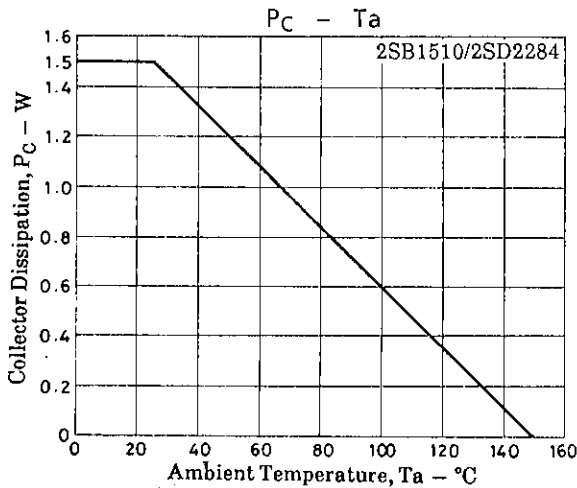
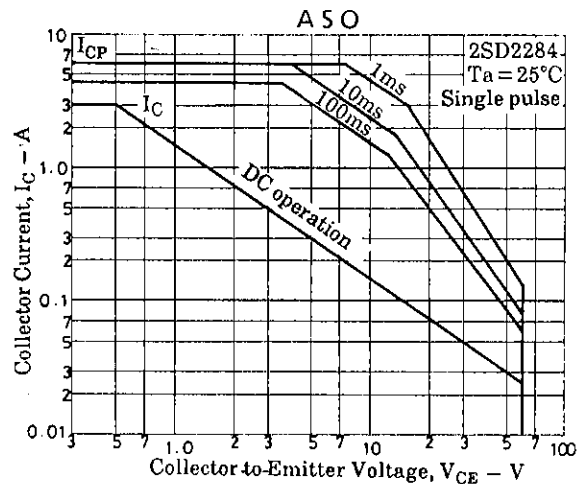
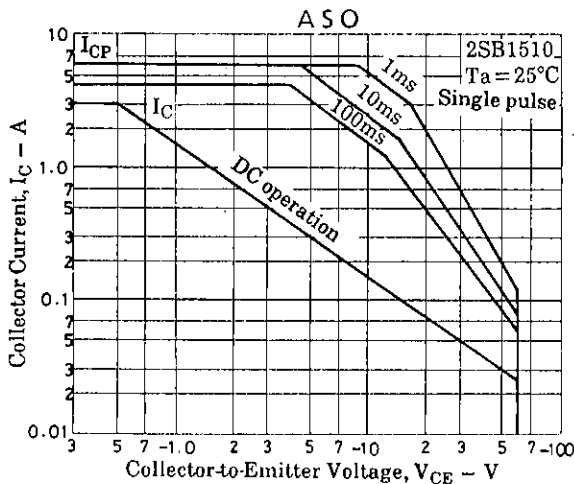
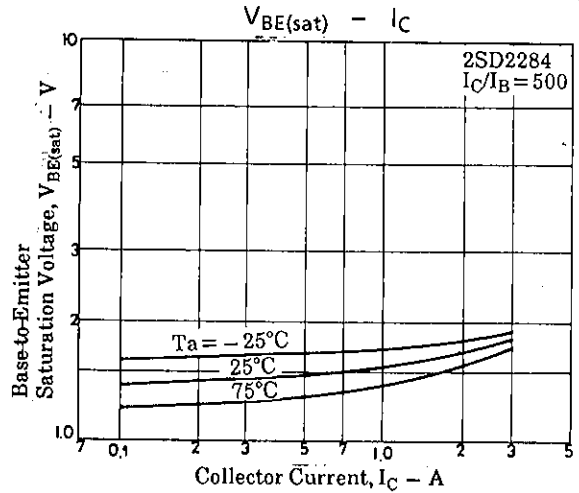
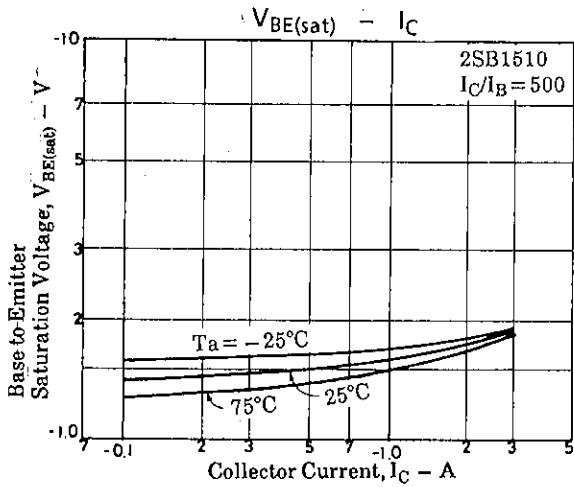
E : Emitter  
C : Collector  
B : Base

SANYO: FLP

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